

Datasheet

Ethernet Serial Hub (ESH)



The Ethernet Serial Hub (ESH) forms part of a 'one-box' solution designed to meet the complete on-board requirements of coastal Ultra-Short BaseLine (USBL) operations.

The ESH is the network interface between the in-water acoustic instrument, GPS and the PC that runs the positioning software. It also provides power and communications for acoustic transceivers.

The ESH includes a time source that can be linked to an internal or external GPS PPS input, allowing the Ranger 2 system to accurately time-stamp incoming data from external devices such as gyro, VRU and GNSS to UTC.

Wi-Fi connectivity allows the PC to connect to the ESH using a Wi-Fi adapter instead of ethernet.

Key Features

- 3 port network switch
- 10/100 fast ethernet uplink
- 4 serial ports RS232
- 1 transceiver port providing 48 V dc power
- 1 responder trigger port
- 1 PPS input port
- Wi-Fi connectivity
- Integral GNSS with SBAS

Specifications

Ethernet Serial Hub (ESH)



Feature	Type 8211	
Storage	Internal 32 GB eMMC	
Ports and Connectors	4 x RS232 ports (DB 9) 3 x RJ45 10/100 ethernet sockets 1 x BNC jack 1PPS input 1 x BNC jack responder output 12 V, 100 mA 1 x SMA jack GNSS input (RF coaxial) 1 x Reversed polarity-SMA jack (Wi-Fi) 1 x 48 V transceiver connector (Amphenol) 1 x IEC socket 115/230 V ac, 1 A, 60/50 Hz	
Power Supply	Auto-sensing ac input voltage: 115–230 V, 60/50 Hz Maximum current: 1 A Average operating current: 0.16 A @ 230 V (without transceiver)	
Environmental Specifications	Operating	-5 to 40°C (23 to 104°F)
	Storage	-20 to 55°C (-4 to 131°F)
	Relative Humidity	20–80% (non-condensing)
	Vibration	Frequency 5 to 13.2 Hz – 1.0 mm peak displacement Frequency 13.2 to 100 Hz – 0.7 g acceleration (DNVGL-CG-0339 class A)
Safety	Complies with EN61010-1	
EMC	Complies with immunity & emission requirements of EN60945	
Dimensions (Length x Width x Height) 1U Rack Mounting (without feet)	430 x 295 x 44.4 mm (16.9 x 11.6 x 1.75")	
Weight	3.3 kg (7.3 lbs)	